Obesity within the Workplace: A Content Analysis of Health Interventions within Organizations

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I have adhered to the Trinity Washington University policy regarding academic honesty in completing this assignment

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Abstract

Obesity is a major health epidemic in today's society. There is much research focused on reducing obesity and improving overall health among individuals. Additionally, much research on the effectiveness of obesity related health programs exists; however, there is a need to for a comparative analysis of the effectiveness of interventions and programs in reducing obesity. This research project will involve a meta-analysis of the effectiveness of comprehensive health interventions and programs for obesity within different organizations. By contrasting and comparing various interventions, the most effective methods will be compiled and utilized to propose an overall encompassing health program for addressing and reducing obesity within the workplace. This research will be conducted through a qualitative content analysis of the interventions and programs using scholarly literature, documents, and reports. This research will aid employers in developing and implementing health programs targeted towards improving obesity within the workplace.

Keywords: Obesity, workplace, physical activity, BMI, CDC Lean, nutrition, physical activity, workplace wellness program, health intervention, organization.

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Introduction

Obesity is major health issue in today's society. It is often associated with many other health risks such as diabetes, hypertension and stroke. On average, approximately two of every three adults are overweight or obese (Ogden et al., 2006). Growing interest in improving the health determinants of individuals, highlights a need to examine existing and emerging methods that aim to not only reducing obesity but improve overall health within the United States and globally as well.

Recent research has examined the use of workplace wellness programs and their effectiveness in reducing obesity within the workplace. Researchers within the last decade are investigating what role obesity plays within the workplace and its effects on not only the employee but the employer as well. While this research investigates various methods used within organizations, there is very little research that discusses what methods work best overall. The research discussed in this paper will examine various methods of reducing obesity within the workplace using a qualitative content analysis method. By examining these various methods, health practitioners and organizations will be able to determine and implement the methods that work best for their organization and their employee resulting in improved health and a more sustainable workforce.

Statement of the Problem

With obesity rates affecting nearly 40 percent of the U.S. population by 2015, (Yang & Beydoun, 2007) obesity must be addressed by not only the public health community but by individuals worldwide. Both the employee and employer are being affected in different ways. The employee suffers from obesity through direct and indirect costs to their health. The average obese (BMI 30 to 35) female employee has higher medical expenses that range from $1,071 to

$1,549 compared to a female of normal weight (Finkelstein, Fiebelkorn & Wang, 2005). Employers suffer as well as through increased worker's compensation claims, lost workdays (Osbye, Dement & Krause, 2007), employee absenteeism (Finkelstein et al. , 2005), and employee presenteeism (Ricci & Chee, 2005). These effects have an impact on the health of a nation as well as its economy. Attention must be made in specifically in addressing obesity in the workplace and identifying what practices can be employed to improve health practices.

Purpose of the Study

This research aims to educate not only health practitioners but organizations as well whose interest is in improving the health of their workforce and increasing work productivity and overall employee engagement through the use of workplace wellness programs and health interventions. Employers many times lack the awareness, understanding, and experience that are required to design, implement, and evaluate a health promotion program within the workplace (Goetzel, 2001). This research will bridge the gap between employer and employee by examining health interventions within the workplace. In bridging this gap, both employer and employee benefit by reducing both direct and indirect costs as it relates to overall health and the cost associated with the risks of heart disease, stroke, and diabetes as it relates to obesity within the workplace.

Significance of the Study

Although there are successful health promotion programs within organizations, effective practices are scarce and not widely implemented throughout organizations world-wide (Roemer et al., 2013). By examining several best practices among organizations and utilizing them in this research, organizations will better be able to implement these health interventions and benefit

from the positive results. These results will benefit both employee through improving their health and creating a more productive and thriving organization as whole.

Theoretical Perspective

In research, the use of behavior change models is essential in not only preventing weight gain but also losing excess weight to help an individual meet the goal of a healthier lifestyle (Daddario, 2007). The theoretical perspective that is most applicable as it relates to obesity in this study is Health Belief Model. The Health Belief Model or HBM is one of the oldest social cognitive theories and was founded by Hochbaum and his fellow colleagues at the US Public Health Service (Dedeli & Fadiloglu, 2011). HBM addresses how an individual's beliefs on health and the decisions they make affect their behavioral change (Daddario, 2007).

The HBM used in this research is derived from scholars Stephen Sapp and Chih-Yuan Wang who interpret and correlate the health belief model primarily to proactive behavior than avoiding disease (Sapp & Wang, 2007). HBM focuses on perceived susceptibility (or perceived susceptibility), and diet-health awareness (or perceived consequences) and how they affect perceived adequacy of a current diet (or perceived threat of disease in other adaptations of the HBM) (Sapp & Wang, 2007). In applying the health belief model to addressing obesity within the workplace, one must first understand the processes behind why people make the choices they do as it relates to health specifically eating, exercise and weight management. By applying the HBM when planning proposed interventions as it relates to obesity within the workplace, health practitioners and employers have a better understanding of their employees and thus a more targeted program to fit their needs.

Research Method

The research method utilized in this study is a qualitative content analysis which uses a coding method to create a scheme for developing the variables to be studied (Remler & VanRyzin, 2011). Qualitative secondary analysis uses already produced or published information to develop "new social scientific and/or methodological understandings" (Irwin, 2013, p.295). The overall discussion of obesity can having varying viewpoints and attitudes towards the subject and with many organizations overlooking the opportunity to use solutions to combat obesity (Heinen & Darling, 2009), much research and methods go often unnoticed. This study will examine the research that already exists and use this data to evaluate health interventions of obesity within the workplace while compiling this data to create an overall encompassing health module that can be used for organization looking to address obesity within their own organizations. Secondary data will be accessed from several scholarly databases such as Academic Search Premier, ABI/INFORM Complete, etc. Once all data has been compiled, a coding scheme will be established which will be used to analyze the data in each article and will be utilized in addressing the proposed research questions and creating a proposed health module of workplace interventions addressing obesity.

Delimitations

This study focuses on obesity within the workplace, specifically analyzing existing health interventions and programs with various organizations through the use of existing data that has already been published. While other literature examines health interventions and programs that cover a broader range of health issues including obesity, this study will solely focus on health interventions used and aimed in reducing obesity within the workplace through the use of wellness programs within organizations.

Limitations of the Study

One primary limitation of this research is that it does not encompass any primary data but focuses solely on the examination and assessment of existing secondary data. In using only secondary data, the researcher does not have any interactions with any participants and thus does not receive any data from the participant. Secondary data has some limitations including, availability of data: some topics may be more widely researched than others which may distort research and the use of existing data may not provide a substantial amount of data for small areas of studies (Remler & VanRyzin, 2011). Moreover, it may not measure the applicable variables of interest or may not encompass the right combination of variables; may be out of date to be used for current research or may not be easily accessible due to privacy and confidentiality agreements (Remler & VanRyzin, 2011).

Summary

Obesity is a major health problem which can lead to a multitude of health risks such as diabetes, stroke and hypertension. With obesity being an issue in the forefront of public health, there is a greater need to address this issue and examine intervention methods to reduce obesity. In looking at obesity within the workplace, both employers and employee have a part to play in reducing obesity within the workplace. One attainable solution is to examine both existing and new practices to reducing obesity within the workplace through workplace wellness programs and health initiatives with organizations. By implementing these programs, both the employee and employer will benefit through healthier lifestyles and a more productive workforce contributing to a better economy.

Literature Review

Obesity is a major health epidemic in today's world and affects millions of people in various ways. Being overweight and obese is attributable to many chronic diseases such as, type two diabetes, cardiovascular disease, musculoskeletal disorders, and contribute to a lower quality of life (WHO, 2003; Garfunkel, 1986). While there are many interventions including health promotion and prevention that aim to reduce obesity rates, this research focuses solely on obesity within the workplace and interventions or workplace wellness programs that are currently implemented within varying organizations to assess and discuss what approaches work best toward employees in the workplace. This literature review focuses on five major aspects as it relates to obesity within the workplace. Each aspect contributes to obesity within the workplace and will aim to introduce and inform the reader about obesity in the workplace (in a general context), perspectives and theories related to obesity, both the employer and employee view on obesity and new and existing interventions within organizations that address obesity within the workplace.

Obesity within the Workplace

Obesity within the workplace has begun to be a major health outcome that now has been on the forefront of the public and community health arena. With many of individual's lifestyles being sedentary, much of Americans' time is being spent at the computer, in meetings, on the phone, and in the car (Litchfield, 2010). Many employees have existing health behaviors including smoking, excessive consumption of alcohol and overeating (Richmond, Wodak, Bourne & Heather, 1998). With these factors, including decreased physical activity and unhealthy eating being a contributor to obesity, this issue must be addressed. According to recent statistics, the percentage of overweight and obesity in the U.S. adult population is more than 60%

(Ogden & Carroll, 2010). As these overweight and obesity rates rise, so do the health outcomes associated with obesity.

In analyzing how obesity relates to the workplace, workforce productivity, and efficiency will also decline resulting in a higher percentage of time off, leave and absence (Perry, 2012). Most research has indicated that the primary source of obesity within the workplace is attributable to the sedentary, computer based work that may employees use on a day-to-day basis for a period of 6 to 8 hours each day (Perry, 2012). These activities in the workplace allow for increased work productivity however, it also influences the health of the employee completing the task or assignment.

The more time an individual spent sitting at his/her desk, the more likely that person was to be overweight (Mummery, Schofield, Steele, Eakin, & Brown, 2005). Similarly, in a study conducted with 51 office workers concluded that the more overweight a person is, the more likely they are to spend most of the day sitting at their desk (Benden, Congleton, & Fink, 2011). Through the use of well-designed and properly implemented interventions with the workplace that aim to address obesity, both the employee and employer can benefit through, better nutrition, increased physical activity, reduced worker risk, and health care costs for the employee and employer (Chalupka, 2011).

Models and Theories: An approach to obesity

As it relates to obesity and being overweight, it seems like the solution is quite evident, eat healthier and be more physically active. However, in a society where food is mostly abundant, and most jobs require sedentary hours at the desk, this goal may not be as achievable as most may think. Overall, behavior change models are used to address many health issues and are important in preventing weight gain, and loss of excess weight gain to help an individual live

a healthier lifestyle (Daddario, 2007). This section will discuss two major theories which scholars find to be most applicable and promising as it relates to obesity and weight management. These theories are: Health Belief Model and Theory of Planned Behavior.

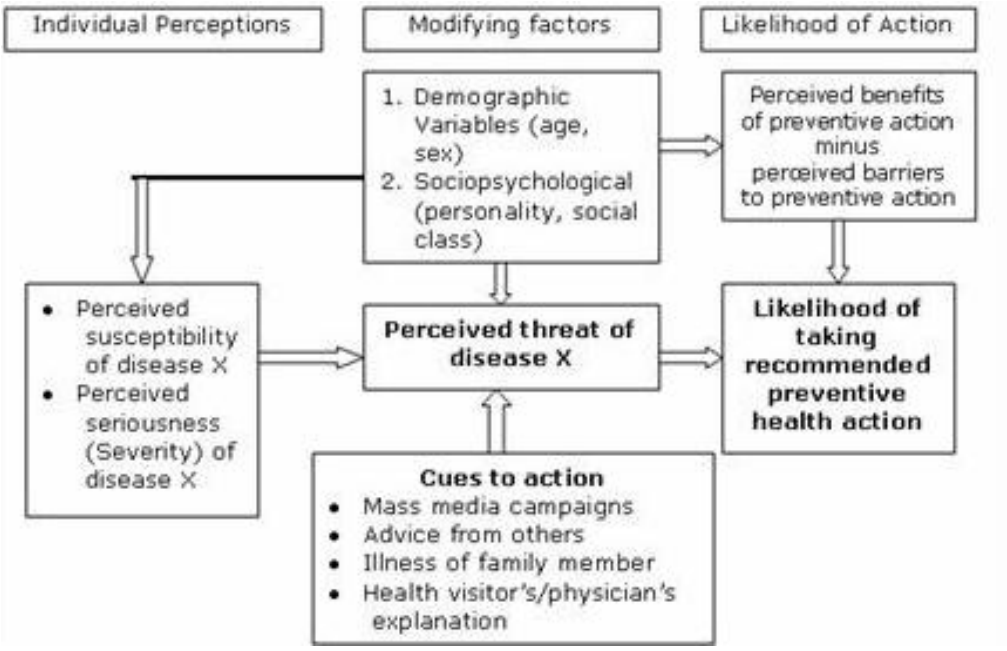

Figure 1. The Health Belief Model

The Health Belief Model (HBM) is a frequent theory used in the public health arena, and can be applied as it relates to obesity in the workplace as it helps both the researcher and the reader gain an understanding of the psychosocial process which influences individuals' food practice and intake. HBM focuses on two main types of beliefs which influence a person to take action (in this case as it relates to obesity), beliefs relates to taking preventative action (ie: exercise and healthy eating) and beliefs related to modifying factors that facilitate or enable the action (ie: lack of exercise) (Dedeli & Fadiloglu, 2011).

A major component in understanding the HBM as it relates to obesity is understanding the role that food intake plays and understanding how nutrition affects one's motivation to engage in healthier eating (Sapp & Weng 2007). Thus scholars have noted that programs that

focus on behavior and encompass the HBM into their health interventions tend to be more effective and more likely to actually influence behavior changes. Those programs that encompass nutrition education with motivators that stress importance of change and reinforcement also are more successful than other programs (Sapp & Weng 2007). Additionally, scholars have found that many overweight or obese patients who fail to lose weight, or regain the weight they have loss have done so due to in part of emotional or psychosocial reasons or because of their lack of knowledge as it relates to understanding the need for change (Dedeli & Fadiloglu, 2011). By implementing a change in one's behavior as it relates to the HBM, one must changes many facets of behavior including exercise, nutrition, responses to stimuli, and any other factors that may affect a person specifically (Dedeli & Fadiloglu, 2011). By encompassing and understanding the underlying factors that affect and influence one's behavior thus aims in implementing an ultimately overseeing an intervention within the workplace that can be successful for both employer and employee.

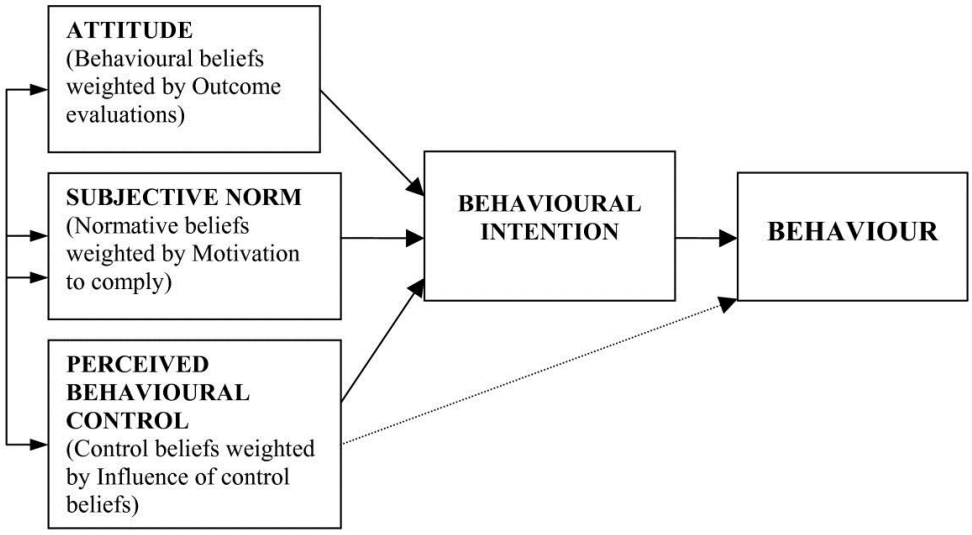

Figure 2. Theory of planned behavior

Theory of planned behavior. While the health belief model has been a standing model used in the public health field, there are some critics who find the Theory of Planned Behavior to be more promising as it relates to weight management. Scholars have found a contradiction in the HBM in that young adults who experience an obesity-related co-morbidity were not likely to engage in weight loss or increased physical activity regardless of the threat (Daddario, 2007). The theory of planned behavior hypothesizes that attitude, subjective norms, and perceived behavior control predict an individual's intentions, which predicts the actual behavior they partake in (Peters & Templin, 2010). Therefore, an individual's beliefs about obesity, nutrition, exercise or lack thereof all contribute to their intent to either change their actions or remain as they are.

Viewpoints on obesity within the workplace. As obesity rates continue to rise within the United States, there is an ever-growing need to address what approaches to take to address this obesity epidemic. Despite the emergence of interventions within the workplace, many employers do not recognize the benefits that overweight and obese employee would receive through the use of obesity-related interventions within the workplace (Linnan, et al, 2012). This ultimately results in neither the employer nor the employee benefiting and thus leaves the obesity within the workplace as a stagnant problem. The following section will discuss the viewpoints of the employee and the employer as it relates to obesity within the workplace.

Employer views and roles in obesity within the workplace. The effects of the obesity epidemic specifically within the workplace have affected employers in several ways. These include higher insurance premiums, increased disability costs and lost work productivity among employees (Blackburn, 2008). On average, employers spend approximately $13 billion annually on obesity (Finkelstein, et al., 2009). Recently, employers have begun to address healthier

lifestyles in the workplace thorough healthier catering policies or low-calorie choices in the cafeteria and vending machines; however, these practices have not produced a level of health behavior change among employee to lower the growing healthcare costs that may employers have to pay (Blackburn, 2008). Another determent of interventions that many employers have found is that there is a lack of data as it relates to cost-effective interventions among organization and this leads to reluctance among employers to implement these interventions without the assurance that work productivity will improve and cost savings will increase (Blackburn, 2008). Several companies such as PepsiCo, Glaxo-SmithKline, Johnson & Johnson, and Coors Brewing Company have proactively taken measures in health interventions in their workplaces. These include: Pilates, yoga and spinning classes for employees, smoking cessation programs, health and wellness contracts among employees, and savings of 1.9 million dollars annually (Perry, 2012).

Employee views and roles in obesity within the workplace. Employees also have a role in obesity within the workplace and are also affected in many ways. They are often at risk for obesity due to the static nature of the job, low socioeconomic status, unhealthy food alternatives, and lack of availability and time for physical activity (Gates, Brehm, Hutton, Singler, & Poeppelman, 2006). Additionally, obese people tend to incur higher medical costs that are 37 percent higher than spending for people of normal weight. In a survey, Gabel et al. (2009), evaluated the perceptions of obesity among the workplace among employers and employees Findings from the study indicated that 80 percent of employees surveyed believed that "programs relates to weight management or health lifestyles belong in the workplace" (Gabel, et al., 2006, p. 49).

Interventions and Approaches within the Workplace

While obesity continues to grow at rapid rates, many organizations are taking new health approaches as it relates to obesity within the workplace. Through the use of workplace obesity programs, employers can reduce obesity, lower health care costs associated with obesity and other health risks, reduce absenteeism and employee turnover, and increase employee satisfaction, productivity, and morale (Katz, O'Connell & Yeh, 2005). Workplace programs provide an opportunity for employees to attend programs and interventions with their fellow colleagues thus allowing a culture of peer support and behavior changes as it relates to weight management and other health risks related to obesity (Richmond, Wodak, Bourne & Heather, 1998). Because most employees spend a third of their day at work, it is important to identify different methods of practice that work for varying organizations. While worksite wellness programs have dates back to the 1970's there is a critical need where employers must use more aggressive methods to take the obesity epidemic (Blackburn, 2008). The workplace can provide an opportunity to change the social and physical environment to improve health outcomes (Richmond, et al., 1998).

Review of Related Research

There is much research as it relates to obesity and weight management varying from different intervention methods such as nutrition and healthier eating options to physical activity and workplace wellness programs in organizations. These worksite health promotion overall relates to strategies designed to improve health-related behaviors and health outcomes of employees (Anderson, et al. 2009). While organizations have differing programs, many workplaces have limited resources to develop and implement these strategies that are often recommended by health and wellness experts (Gates et al., 2006). Additionally, while research

has focused on worksite environment such as physical activity, worksite policies, and associated health behaviors, organization must also focus on worksite norms and values that contribute to health, weight, and physical activities in the workplace (Lemon et al., 2009). The research discussed in this qualitative content analysis will discuss the various factors that contribute to obesity in the workplace and will analyze the varying research methods that aim to prevent and reduce obesity within the workplace.

Theoretical Construct

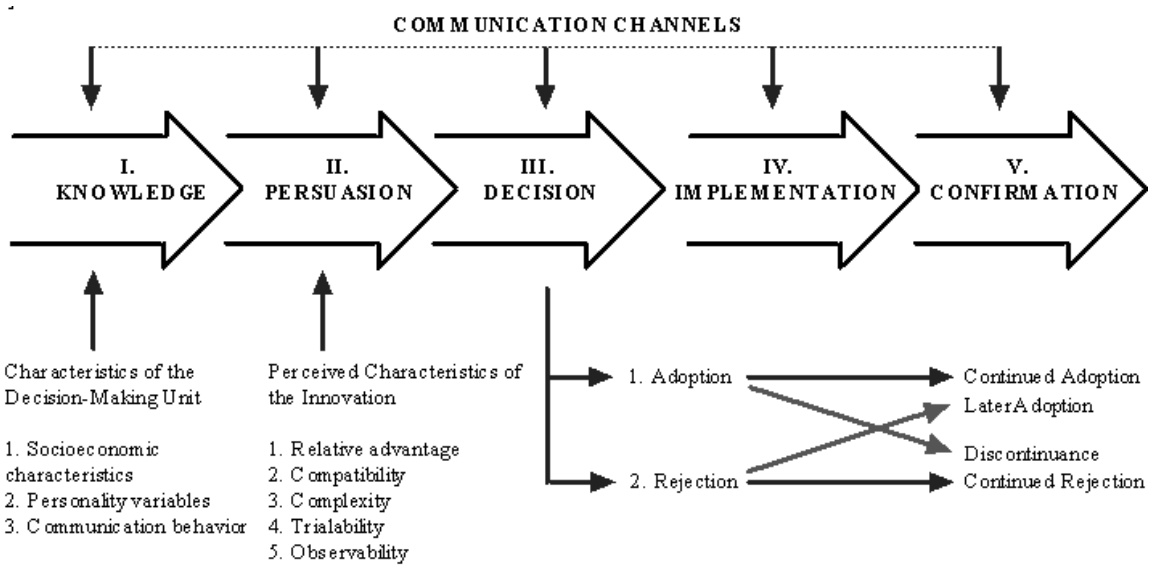

Figure 3. Stages of diffusions of innovations theory

Within this study, the researcher will employ the use of the Diffusion of Innovations Theory (Rogers, 1995), which explains how an innovation (a new idea or invention) spreads throughout a population over time. Because there are many existing interventions as it relates to obesity within the workplace, the Diffusion of Innovations Theory will be applicable to both the employee and the workplace and the varying approaches or interventions used within the workplace to reduce overweight and obesity rates among employees. Recognizing that many

approaches work differently for some than others, the Diffusion of Innovations Theory focuses on those needs, attitudes, and beliefs of those targeted as well as the factors that could affect behavior, and the barriers that prevent or circumvent the intended behavior (Rogers, 1995).

Employee. The *employees*' actions and beliefs are central to their overall interest in the wellness program within their organization. If an employee perceives no perceived threat or incentive as it relates to their health, then they may be less likely to engage in health program.

Employer. The *employer* must take action by implementing new health programs or revamping existing health programs. Without implementation, the issue will remain stagnant.

Wellness program. The *wellness program* is the overall agent of change that aids in helping the employee make the change that is needed for both the employee and the employee. This may vary through nutritional programs, a physical fitness class the organization may offer, etc.

Attitudes and beliefs. *Attitudes and beliefs* are central to both the employee and the employee and thus are recognized in the Health Belief Model previously discussed.

Figure 4. The theoretical construct: Obesity within the workplace

This diagram illustrates the relationship of the varying factors that contribute to obesity within the workplace. Each factor contributes equally to the underlying issue of obesity in the workplace. In order to truly be a successful health program within an organization, the intervention must encompass all four factors mentioned to achieve optimal success.

Summary

With obesity rates rising higher and higher today, employers have begun to evaluate and assess methods that will reduce costs associated with obesity and other health risks. Obese employees have spent higher medical costs than those of average weight. This results in loss of work productivity, and reduced employee morale. Through the use of workplace wellness programs, both the employee and employee benefit far greater than not addressing this obesity epidemic. Further research discussed will analyze existing organizational interventions and concur which methods work best for an employee's varying needs. Through the use of employee wellness programs obesity rates are reducing ultimately aiding in reducing the obesity epidemic as it currently stands.

Research Methodology

This research methodology chapter will discuss the research questions the researcher sought to answer in the study, the use of qualitative content analysis in the study, how the researcher collected the data, and the data analysis strategy used to conduct the research. The research methodology employed in this study is referred to as a content analysis, which is a qualitative data collection method that involves primary research, collecting and analyzing secondary data as a source. This method involves analyzing and interpreting the data in a more systematic method (Remler & Van Ryzin, 2011). Through the use of content analysis and coding in this study, the researcher read and analyzed current and existing articles related to workplace wellness programs. These articles were identified by categories and themes and then coded using a three-step process to create a meta-analysis of workplace interventions as it relates to obesity within the workplace.

Research Questions

This content analysis of health interventions and programs within the workplace will examine and investigate the following questions:

Research Question 1 (RQ1): Do workplace wellness programs work in reducing obesity?

Research Question 2 (RQ2): How do the employer and the employee perceive obesity in the workplace?

Research Question 3 (RQ3): What intervention methods are most effective in reducing obesity within the workplace?

Data Source and Collection

All of the existing research selected came from a variety of databases online through Trinity Washington University. These electronic databases include: ABI/INFORM Complete, EBSCO Host, CINAHL, and ProQuest Nursing and Allied Health Journals. Keyword searches included: *workplace wellness programs, organizations, health interventions, obesity, physical fitness in organizations, nutrition in organizations, and obesity in the workplace*.

All articles were retrieved through a keyword search the researcher conducted. The researcher developed criteria upon which each article must meet. The criteria are as follows:

- The article or study was published within the past 10 years.
- The article or study is peer reviewed and published in a scholarly journal.
- The article or study relates to workplace wellness programs or interventions within existing organizations and relate to obesity in some aspect through discussion of physical fitness, nutrition, etc.

Examples of pertinent data related to obesity within the workplace using the search criteria the researcher established were:

Roemer et al. (2013). A descriptive evaluation of CDC's LEAN Works! Leading employees to activity and nutrition—A web-based employer tool for workplace obesity management. The authors discuss the implementation and effectiveness of CDC Lean, a web-based initiative for obesity management. In the implementation of the program, employers found the recommendations were informative and practical. There were some drawbacks also discussed which included lack of recruitment of employees to actually use the web-based tool and inability to capture overall satisfaction with the web-based tool.

Further searches yielded the following studies considered for inclusion in this content analysis:

White and Jacques. (2007). Combined diet and exercise intervention in the workplace.

Eves, Webb and Mutrie. (2006). A workplace intervention to promote stair climbing: Greater effects in the overweight.

Lassen, Thorsen, Sommer, Fagt, Trolle, Biltoft-Jensen, & Tetens. (2011). Improving the diet of employees at blue-collar worksite: Results from the 'Food at Work' intervention study.

Ethical Considerations

The research conducted in this study does not involve human interaction and was approved by the SPS IRB Committee. While this study does not involve any interaction with human participants, there are some considerations to take into account. Because this research focuses on secondary analysis, ensuring that all information is cited properly is key in this study. Additionally, there are other emerging ethical considerations that must be taken into account as it relates to qualitative secondary analysis. Most qualitative research is conducted through personal interactions with participants, which often involves an agreement between the researcher and the participant.

There has been a debate with whether secondary analysis of qualitative research is completely ethical and thus informed consent may needed to be taken as it relates to qualitative secondary analysis (Irwin, 2013). Many concerns voice that the use of the data by others does not possess the same viewpoint as those from primary data. Irwin (2013) states that, "in this view, presence at the point of data creation and knowledge of the proximate contexts in which it occurs are deemed crucial to an authentic understanding and analysis of data" (p.297). She also notes

that researchers may also be strongly implicated with the qualitative datasets and their own rights be overlooked and unnoticed (Irwin, 2013).

Research Design

While existing research discusses varying interventions and programs that address obesity within the workplace, there is limited research that analyzes these various methods as a whole. Recognizing that each employer and employee has differing needs as well as different cultures and perceptions as it relates to obesity, the use of a qualitative content analysis allowed the researcher to gather existing research pertaining to these interventions and analyze them individually to compare and contrast among other existing interventions. Additionally, the use of qualitative content analysis allowed the researcher to address the research questions, which the researcher initially sought to answer from the start of the study.

Ten scholarly articles were reviewed and analyzed in this study. These articles met a criteria established by the researcher. The researcher then began the process of analyzing the data by reading the articles in depth and then used first and second cycle coding process then triangulation to analyze the data. These articles vary in intervention methods such as web-based intervention to physical activity and nutrition interventions. By using this method of content analysis and meta-analysis, employers will be able to use this study to develop their own workplace wellness programs addressing the specific needs of their own employees as it relates to obesity within the workplace.

Summary

While it is often viewed as a place where duties and tasks are completed to meet an overall goal or outcome, the workplace has the opportunity to change and improve the social and physical environment for employees (Richmond, 1998). Much existing research has explored

various methods that work and may be successful in addressing obesity within the workplace; however, what is successful for one organization may not be a perfect fit for another organization. Through the use of a content analysis the researcher is able to analyze the existing interventions within the workplace, and develop a content and meta-analysis approach. This approach will be used in this study and will thus offer employers an overall assessment of these interventions thus enabling organizations to consider which method(s) may work best for their employees.

Findings

In this chapter, the researcher discusses the findings from the qualitative content analysis conducted in the study using the ten scholarly, peer reviewed articles utilized for this research. The articles met a criterion established by the researcher, which included, publication within the last 10 years, and related to workplace wellness interventions or programs that aim to address obesity within the workplace in some aspect. This researcher will discuss how data was analyzed in the study using the three step coding process, which involves descriptive coding, pattern coding and triangulation. This coding process will be discussed in depth and will aid in analyzing the articles to compare and contrast existing interventions as it relates to obesity within the workplace.

Data Analysis Strategy

The analysis method used in this research study is referred to as a data coding method. The primary method of analyzing the data in this research will be through the use of coding. Coding involves organizing material into segments of text followed by designating a word or phrase in order as a means of developing a general understanding of the data (Creswell, 2014). This coding method organizes and tags data through using a system of categories and/or codes (Remler & Van Ryzin, 2011). By viewing this data through coding and organizing the data into smaller segments, the researcher can analyze and discuss the content of the data in a more precise manner as it relates to obesity in the workplace and interventions within varying organizations.

The data coding method employed in this study was *descriptive and pattern coding*. Descriptive coding involves summarizing and assigning phrases or terms in a passage of data that have meaning or significance (Saldana, 2009). These phrases or themes are most often ones

that are found as major findings in qualitative research and can often be used as headings in the findings section of a qualitative study (Creswell, 2014). Second level coding employed in this study by the researcher is *pattern coding* in which the data retrieved from the first level coding is narrowed down into groupings that have a thematic recurrence in the data (Saldana, 2009). The third level of coding the researcher employed was through *triangulation*, which involves examining the data or evidence from the sources and using the data to build a coherent justification for the themes (Creswell, 2014). By using triangulation as the third step in the coding process, the researcher is able to compare the first and second level coding for validity and determine the greater meaning of the data.

Synopsis of Scholarly Articles

White and Jacques. (2007). Combined diet and exercise intervention in the workplace. This article discussed the implementation and efficacy of a 12-week workplace wellness program that aimed to reduce the risk of cardiovascular disease as it relates to obesity. Factors that contributed to the success of the program included workshops that focused on quick and healthy meals, exercise overview, surviving holiday eating, food and mood connection, and grocery shopping. Limitations of the study were a small sample size, low program completion due to participants' schedules, and lack of a control group to compare and strengthen the results of the study. The wellness program was based on Horowitz (1985) and Fleury's (1993) motivational principles which focuses on achieving positive results through personal awareness, thought activation, self-reinforcement, social support/feedback, and perspective shift toward an internal locus of control.

Eves, Webb and Mutrie. (2006). A workplace intervention to promote stair climbing: Greater effects in the overweight. This article discusses the effects of sedentary

behavior on health and the practice of stair climbing within the workplace to reduce obesity. During the study, researchers implemented a 6-week intervention, which involved the use of poster messages and by the staircases and elevators as well as affixed to stair risers between floors to encourage participants to use the stairs rather than use the elevator. Informational messages varied by topics such as "Regular stair climbing aids weight loss" and "Regular stair climbing lowers cholesterol." Researchers note several uncontrolled effects, which diluted the results of the study such as, availability of escalator and elevator which is the quicker or first available option, as well as number of stories and destination. Researchers concluded that participants who were overweight or obese experienced greater effects of the intervention than those of normal weight.

Lassen, Thorsen, Sommer, Fagt, Trolle, Biltoft-Jensen, and Tetens. (2011). Improving the diet of employees at blue-collar worksite: Results from the 'Food at Work' intervention study. This article focuses on the implementation of a food-based study that evaluates the impacts of health eating in "blue-collar" worksites using a participatory research approach. The study lasted for 6 months in which participants involved in the study were asked participate in face-to-face interviews as well as recording their daily food intake using food diaries. The study used both an intervention group (those participating in interviews and food diaries) and a control group (those receiving neither interview nor food diaries). At the conclusion of the study, researchers found that employees in the intervention group made healthier choices compared to the control group and significantly increased their daily fruit and vegetable intake. Limitations of the study included, small sample sizes, reliance of the data from self-reported information from the participants, and brief duration of the intervention period.

Researchers concluded that overall the findings of the study were positive and that evaluation of workplace settings as it relates to eating can aid in having an impact on overall health.

Yancey, McCarthy, Taylor, Merlo, Gewa, Weber, and Fielding. (2004). The Los Angeles Lift Off: A sociocultural environment change intervention to integrate physical activity into the workplace. This study discusses the implementation of a workplace wellness intervention that consisted of 10-minute fitness breaks, which were integrated into meetings or events longer than an hour during the work day. The exercise breaks were composed of simple aerobic dance movements specifically designed for sedentary, overweight adults in the workplace. The intervention consisted of a control group who would take 10-minute breaks such as bathroom or smoke breaks compared to that of the intervention group who participated in 10 minute breaks of exercise and movement. Researchers concluded at the conclusion of the study that lower ratings of feelings of depression and higher ratings of energy were reported in the intervention group compared to the control group. Furthermore, while this intervention discussed its results in a smaller setting, further research with a more socio-demographically diverse population would better determine the long term effects of incorporating exercise breaks during the work day.

Levine & Miller. (2007). The energy expenditure of using a "walk-and-work" desk for office workers with obesity. This study discusses the use of a vertical workstation that incorporates a treadmill, allowing an employee to work while walking. The study involved fifteen sedentary, obese individuals who worked primarily at computer stations and did not regularly participate in exercise. Researchers concluded that participants tolerated the vertical workstations and no injuries or falls resulted from use of the workstations. Limitations of the study were, duration of time on the workstation (participants did not use the workstation of the

full extent of the workday) and work productivity was not asses. Researchers also concluded that while there were some limitations in the study, overall, the walk and work desk was associated with significant increases in energy, which could help, reverse the obesity epidemic.

Roemer, Liss-Levinson, Samoly, Guy, Tabrizi, Beckowski, Pei and Goetzel .(2013). A descriptive evaluation of CDC's LeanWorks! Leading employees to activity and nutrition – A Web-based employer tool for workplace obesity management. This study involved 29 employers and was conducted over a 12-month period to provide employers with a comprehensive resource for planning, designing and promoting worksite obesity programs. The website provided employers with information such as opportunities and barriers related to weight control in worksites, effective worksite based obesity management interventions, and practices for obesity prevention and control at worksites resulting from site visits and employer interviews. Researchers concluded that employers using the web-based tool were overall enthusiastic about the tool as it relates to its helpfulness for worksite obesity management. Limitations of the study were the use of the tool as a pilot study, small sample size, and lack of recruitment of employers with no program at the start of the study.

Chan, Ryan, and Tudor-Locke, (2004). Health benefits of a pedometer-based physical activity intervention in sedentary workers. This study referred to as PEI-First Step Program (PEI-FSP) discussed the use of a pedometer based intervention with employees who had sedentary jobs such as clerical, administrative, or data processing. The primary purposes of the intervention were: for feedback to participants on increasing levels of physical activity, as a motivational tool and environmental cues to increase physical activity and to evaluate changes in the participant's physical activity. The study lasted for 12 weeks in which participants were instructed to set individuals steps per day and self-monitor their progress made each workday

using the pedometer. A limitation of the study was a lack of a control group to compare the results of the intervention group. Researchers concluded that the implementation of PEI-FSP was successfully adapted with sedentary employees and suggests that it is feasible for healthy adults to reach approximately 10,000 steps per day.

Gates, Brehm, Hutton, Singler, and Poeppelman, (2006). Challenging the work environment to promote wellness. This study discussed the use of a community-based participatory research method in planning and implementing wellness programs to prevent and reduce obesity with the use of environmental approaches. These environmental factors include: nature of jobs, low socioeconomic status, limited availability of healthy food alternatives, and lack of available space and time for exercise. The primary source of the research conducted was through the use of focus groups of four companies. The manager and employee focus groups were conducted during a 3 month period. Researchers concluded that environmental factors were important contributors to obesity and programs should include these environmental approaches that focus on where people live, play and work.

Linnan, Tate, Harrington, Brooks-Russell, Finkelstein, Bangdiwala, Birken and Britt. (2012). Organizational and employee-level recruitment into a worksite-based weight loss study. This study was a three-arm group-randomized controlled intervention trial that was designed to test three levels of support in employee's weight loss. These support levels are: environmental change increasing access to healthy foods, environmental change including a web-based weight loss intervention, and environmental change including a web-based weight loss intervention plus a small cash incentive for its participants. This intervention was targeted toward college campuses and a total of 17 campuses participated in the study. Researchers concluded that worksite-based weight loss programs should focus on measuring reach (who joins

the programs) and representation (whether they represent the larger population and how to remove the barriers that prevent full representation in the programs). Additionally, researchers found that other measures such as effectiveness, implementation and maintenance are also key factors in the overall success of worksite-based weight loss programs.

Lemon, Zapka, Li, Estabrook, Magner and Rosal. (2009). Perceptions of worksite support and employee obesity, activity and diet. This study discusses the effects of employee obesity and health behaviors on employee's perceptions of worksite environmental support. The study is a site-randomized trial of an ecological intervention that targeted weight gain among hospital employees. Researchers examined three facets, which included: perceptions of organizational commitment to employee health, associations of employee demographics and job characteristics as they relate to these perceptions and association of perceptions on body mass index, physical activity and eating behaviors. Researchers concluded that interventions that promote support from leadership and management in promoting healthy lifestyles of their employees, can promote weight control in their respective organizations.

Data Analysis and Coding

Descriptive Coding. The first level of coding used to analyze the existing data the researcher used in the study was descriptive coding. Descriptive coding can primarily be nouns that summarize the topics of the data (Miles & Huberman, 1994). This coding method is useful in a qualitative analysis in that it allows different types of data such as interviews, field notes, and documents to be gathered for one study (Saldana, 2011). During this study, the researcher read each article and identified the keywords and phrases that summarized the content. These keywords and phrases are listed below in Table 1 as well as the categories derived from each article.

Table 1: *Keywords, phrases and category results from data*

Author(s) and Article Title	Keywords and Phrases	Categories
White and Jacques (2007). Combined Diet and Exercise Intervention in the Workplace	Cardiovascular disease, cancer, heart disease, worksite health promotion programs, worksite interventions, convenient, accessible, less expensive, employers, diet and exercise, intensive lectures, training, significant improvement, intervention group, low-fat, greatest improvement, education, dietary changes, work schedules, increasingly demanding, reduced discretionary time available, predominate barriers, workshops, healthy weight, fruits and vegetables daily, food pyramid, health screening, attendance, multiple times, stress and eating, Pilates, a week of sample meals, motivated, fasting, cholesterol, dietary guidelines	Healthy living, employee empathy, work-life balance, health risks, worksite programs, social support, and health program variety, health promotion
Eves, Webb and Mutrie (2006). A Workplace Intervention to Promote Stair Climbing: Greater Effects in the Overweight	Stair climbing, physical activity, jogging, intervention, sedentary behavior, walking, no equipment, energy, reduced coronary heart disease, weight control, escalators, poster, staircases, worksites, signs, artwork, music, elevator, heart attack, banners, messages, stair risers, reinforce, overweight, self-management, weight	Stair climbing, Physical activity, health benefits, reinforcement, visual signage, motivation, health promotion, empowerment
Lassen, Thorsen, Sommer, Fagt, Trolle, Biltoft-Jensen, and Tetens (2011). Improving the diet of employees at blue-collar worksite: results from the 'Food at Work' intervention study.	Socio-economic status, education level, obesity, worksites, blue-collar, healthy eating, health promotion, environmental, participatory, empowerment, dietary intake, food diaries, canteen nutrition environment, good employee-employer relationship, goals, tasks, constraints, opportunities, intervention, control group, kick-off seminar, achievements, network and education opportunities, setting goals, personal interview, background, habits, attitudes, small gifts, fruits, vegetables, energy, sugar	Healthy eating, health promotion, customer service, goal setting, employee empathy/concern, self reinforcement, accountability (self), incentives

Table 1: *Keywords, phrases and category results from data (continued).*

Author(s) and Article Title	Keywords and Phrases	Categories
Yancey, McCarthy, Taylor, Merlo, Gewa, Weber, and Fielding (2004). The Los Angeles Lift Off: a sociocultural environment change intervention to integrate physical activity into the workplace.	Obesity, sedentariness, interventions, excessive food consumption, environmental-level change, physical activity promotion, signs, banners, stair use, walking trails, SES, Blacks, Whites, Latinos, women, socio-cultural environment, physical environment, success, underserved communities, cultural, economic, barriers, absenteeism, multi-level change models, social cognitive theory, 10 minute fitness, leadership style, greater enjoyment, aerobic dance, catchy titles, unmotivated, feelings of well-being, confidence, skill development, workplace, motivation, mood, wellness, morale, depression, energy	Health promotion, minorities, health determinants, multi-level change models, motivation tool, meeting dynamics/productivity, self-esteem, employee morale
Levine and Miller (2007). The energy expenditure of using a "walk-and-work" desk for office workers with obesity.	Overweight, obesity, physical activity, computer based, developed/high income countries, sitting, sedentary, stair climbing, promote walking, vertical workstation, energy expenditure, frame, motionless, treadmill, walking, speed, nutritional excess, low participation, enjoyment, "walk-while-you-work", cost-effective, work productivity, active, enthusiasm	Physical activity, multi-tasking, encouragement, motivation, invention, socio-economic status
Roemer, Liss-Levinson, Samoly, Guy, Tabrizi, Beckowski, Pei and Goetzel (2013). A Descriptive Evaluation of CDC's LeanWorks! Leading Employees to Activity and Nutrition – A Web-based Employer Tool for Workplace Obesity Management.	Employers, knowledge, insight, experience, design, implement, evaluate, health promotion programs, overweight, weight control, obesity, dissemination of information, employer focus groups, opportunities, barriers, promising practices, smaller employers, free, web-based, obesity prevention, recruitment, peer mentoring sessions, webinars, obesity cost calculator, self-report	Health promotion, weight management, cost-effective, obesity prevention, social media, mentoring, accessibility, accountability (self and employer), recruitment

Table 1: *Keywords, phrases and category results from data (continued).*

Author(s) and Article Title	Keywords and Phrases	Categories
Chan, Ryan, and Tudor-Locke (2004). Health benefits of a pedometer-based physical activity intervention in sedentary workers.	Physical activity, sedentary jobs, daily activities, walking, body mass index, time demands, pedometer, diabetic, positive effects on health, motivational devices, environmental cues, clerical, administrative, data-processing, strenuous leisure time activity, adoption, adherence, cognitive, psychomotor, and affective learning tasks, learning strategies, promoting lifestyle changes	Routine exercise, weight management, healthy outcomes, sedentary jobs, repetition, self-awareness, education, goal setting, health promotion
Gates, Brehm, Hutton, Singler, and Poeppelman (2006). Challenging the Work Environment to Promote Wellness.	Overweight, obesity, body mass index, health care, costs, physical activity, healthier food choices, low socio-economic status, limited availability of healthy food choices, space, focus group study, innovations, needs, attitudes, values, factors, environmental interventions, nutrition, organizational goals and policies, themes, excitement, vary, not be sanctioned by managers, short lunch breaks, lack of lighting, buddy groups, healthier choices, signs, simple, humor, website, games, puzzles, handouts	Healthy choices, physical activity, health determinants, multi-faceted intervention, nutrition, policy, mixed reviews, disappointment, lack of support, barriers, team building, collaboration, signage, types of media, accessibility, dissemination of information
Linnan, Tate, Harrington, Brooks-Russell, Finkelstein, Bangdiwala, Birken and Britt (2012). Organizational and employee-level recruitment into a worksite-based weight loss study.	Obesity, overweight, medical expenditures, productivity, weight loss, food, environmental change, cash incentives, recruitment, health promotion, employee, employer, reach, representation, higher risk, strategies, goals, too demanding, race/ethnicity, barriers, implementation, maintenance	Health promotion, productivity, race/ethnicity, rewards, barriers
Lemon, Zapka, Li, Estabrook, Magner and Rosal (2009). Perceptions of Worksite Support and Employee Obesity, Activity and Diet.	Health behaviors, norms, values, obesity, physical and structural environment, worksite policies, perceptions, body mass index, physical activity, behaviors, eating habits, disinterest, unmotivated, environment, fruit and vegetable consumption	Organizational structure, healthy choices, healthy eating, lack of motivation

Once keywords and phrases were derived from the data, they were grouped into categories. Some categories from the content analysis include healthy living, health promotion, weight management, employee empathy, work-life balance, motivation, empowerment, barriers, lack of support, social media, and dissemination of information. An example of how a subset of data was coded using descriptive coding is as follows:

Gates et al., (2006) state "employers and managers were overwhelmingly excited about the initiation of wellness programs at their companies; however, they recognized that employee interest and participation would vary" (p 518). From this excerpt, the key words are employers, managers, excitement, wellness programs, and mixed reviews.

Of the data analyzed in this study, several articles support the categories the researcher derived from the data. Categories such as health promotion, physical activity are emergent in several articles. CDC Lean, a web-based tool for employers and employees focuses on health promotion through identifying the opportunities and barriers related to weight control in organizations (Roemer et al, 2013). By identifying these opportunities, CDC Lean aids in health promotion of best practices in weight management for both employer and employee. Similarly, the Los Angeles Lift Off program uses 10-minute exercise breaks during long meetings to encourage health promotion and activity among employees (Yancey et al., 2004).

Pattern coding. Pattern coding was utilized as the second level coding method in this study in which the data retrieved from the first level coding is narrowed down into groupings that have a thematic recurrence in the data (Saldana, 2009). The pattern codes or themes originating from the categories established during the first level coding method are listed in Table 2 below.

Table 2: *Pattern coding*

Categories	Pattern code/Theme
Healthy living, healthy eating, health promotion, health risks, worksite programs, , and health program variety	Healthy lifestyles, nutrition
Stair climbing, Physical activity, pedometer	Physical activity
Customer service, goal setting, employee empathy, work-life balance, employee empathy/concern, incentives, empowerment, social support, barriers, motivation	Positive and supportive work environment
Self-reinforcement, accountability (self), goal setting, self awareness	Employee Engagement
Reinforcement, visual signage, social media,	Motivational Tools
Health disparities, minorities, education	Socio-economic and environmental factors

During the second level coding process known as pattern coding, six emergent themes derived from the data. These themes were: healthy lifestyles and nutrition, physical activity, positive and supportive work environment, employee engagement, motivational tools, and socio-economic and environmental factors.

Triangulation. The third level of coding used this the study was through *triangulation*, which involves examining the data or evidence from the sources and using the data to build a coherent justification for the themes (Creswell, 2014). By using triangulation as the third step in the coding process, the researcher is able to compare the first and second level coding for validity and determine the greater meaning of the data.

The data used in the qualitative content analysis reveal that there are several factors which must be taken into account as it relates to managing obesity within the workplace. The categories derived from descriptive coding illustrate that health programs targeted towards obesity are multi-faceted in many ways ranging from physical fitness and nutrition to employee engagement and motivation. Lemon et al. (2009) support this argument when stating that much research focuses on objective aspects of workplace environment such as physical and structural environment and worksite policies; however perceptions of norms and values within the workplace related to health, weight, physical activity, and eating have not been studied in depth. Linnan, et al. (2012) argue that if employers believe that they should actively support weight loss programs for their employees, they must understand what types of employees will participate and how to keep them involved.

Both the supporting research from Lemon et al. (2009) and Linnan et al. (2012) illustrate that workplace wellness interventions, whether existing or not, need to encompass the views and perceptions of the target audience to achieve optimal success in reducing obesity within the workplace.

Summary

In the Findings chapter I discussed the three levels of coding utilized in this qualitative content analysis. The first level coding is referred to as descriptive coding in which categories was derived from keywords and phrases in the secondary data. Some of the emergent keywords in the data were physical activity, health behaviors, race/ethnicity, and wellness programs. These keywords and phrases were then categorized using pattern coding which summarized emergent categories into themes such as healthy lifestyles and nutrition, physical activity, positive and supportive work environment, employee engagement, motivational tools, and socio-economic

and environmental factors. Workplace wellness interventions should encompass the views and perceptions of the target audience to achieve optimal success in reducing obesity within the workplace.

Discussion

With predictions that 40% of the US population will be obese by 2015, there is ever more need for change in reducing obesity (Wang & Beydoun, 2007). Research has found that obesity reduces productivity, increases costs of workers' compensation, disability, and life insurance (Finkelstein, Ruhm & Kosa, 2005). Workplace wellness programs and interventions are methods that can be taken to reduce obesity in the workplace. While most of these interventions have been found to be effective, it is necessary to balance the value of increased productivity within the workplace and consider the employee's long-term health (Perry, 2012). This chapter will discuss in depth how the data addresses the questions proposed in the study, conclusions related to the study, implications and limitations as well as the future recommendations for research as it relates to obesity within the workplace. The data found in this study suggests that health interventions within the workplace should encompass physical activity and nutrition as well as methods that encompass both socio-economic and environmental factors to ensure that the needs of the target audience are achieved.

Research Questions

RQ1: Do workplace wellness programs work in reducing obesity?

The findings in this research support the notion that workplace wellness programs are effective in reducing obesity. Scholars suggest that there is a link between strategic workplace health promotion programs and lower health risks, lower health care use, and improved productivity for employees (Berry & Mirabito, 2011). In a stair climbing intervention analyzed during this study, results found that there was a greater effect of the intervention in overweight participants suggesting that stair climbing is an acceptable vigorous physical activity for those individuals seeking to control their weight (Eves, Webb, & Mutrie, 2006). Similarly, Los-

Angeles Lift-Off, a physical activity intervention during the work day, found that employees who participated in the 10-minute exercise provided a "teachable moment" or "reality check" for those sedentary individuals in a more supportive social context (Yancey et al., 2004). Overall, each article analyzed in this research study indicated a form of effectiveness in the implementation of wellness workplace programs. While these programs varied in nutritional, physical activity, and socio-cultural practices, all interventions discussed in this research study had a positive impact in reducing obesity in some aspect. These aspects varied from loss in weight, to improved self-esteem and improved work productivity.

RQ2: How do the employer and the employee perceive obesity in the workplace?

The findings in this study suggest that employer and employee perceptions about obesity within the workplace vary among topics. While employer and employee disagree on some topics as they relate to obesity, both employer and employee both believe that overweight and obesity cause health problems that may require a health care intervention (Gabel et al., 2009). In a survey on employee and employer perceptions on obesity, 71% percent of employers believe it appropriate role for an employer to include obesity related services and benefits for employees (Gabel et al., 2009). However, researchers have found that, employers are hesitant to offer weight-management programs because they believe that implementation of the program may be costly, invade employee privacy, or will not be effective or cost-effective (Linnan et al., 2012).). As a result, employers have thus ignored the cost benefits and improved work productivity of an effective workplace wellness program. Employees perceive workplace wellness programs that address obesity and promote wellness overall as generally effective (Gabel et al., 2009). Recognizing the importance of employer-employee relationship, workplace wellness programs have the potential to strengthen an organization's culture and employee loyalty encompassing

encouragement instead of penalty, assistance rather than pressure, and inclusiveness instead of discrimination (Berry & Mirabito, 2011). Implementation of these workplace wellness programs also improve organizational culture giving employers have the opportunity to ensure the needs of their employees are met to not only increase work productivity but also employee morale as it relates to the organization.

RQ3: What intervention methods are most effective in reducing obesity within the workplace?

While the findings in this research study suggest that various methods are effective in reducing obesity within the workplace, it is also evident that workplace wellness programs that encompass physical activity, nutrition, and environmental strategies achieve better behavioral changes and reach a wider target audience (Lassen et al, 2011). Interventions that promote support and visibility of support of leadership and management in promoting health and wellness of employees can promote weight control (Lemon et al., 2009). Lowe and scholars support this notion when observing that higher ratings of social support are associated with higher perceptions of a healthier work environment affecting several aspects such as job satisfaction, commitment, morale, and lower absenteeism (Lowe, Schellenberg & Shannon, 2003).

Conclusions

The literature and data found in this study indicate that workplace wellness programs and interventions are an effective method in reducing obesity within the workplace. While some employers have programs implemented in their organizations, other employers have not joined this initiative in reducing obesity due to perceptions related to costs. Many interventions methods such as CDC Lean, a web-based program, aim to aid in encouraging employers to implement their own health and wellness programs, which surpasses many of the barriers employers

perceive they will encounter. Additionally, employees perceive workplace wellness programs to be effective in weight-management. While various interventions such as stair climbing, 10 minute exercise breaks, and pedometer based interventions are effective, interventions that encompass physical activity, nutrition, as well as socio-cultural practices such as environmental factors and employee empathy are found to be most effective in that these interventions not only focus on improving weight management but also improve self-esteem and perceptions resulting in increased work productivity, improved employee morale, and a strengthened organizational culture.

Recommendations and Implications

Due to the limited amount of time to conduct the study, only 10 scholarly articles were analyzed in this qualitative content analysis. Noting that there is much existing and new research that has not been included in this study, it is my recommendation that further research be conducted on encompassing several intervention methods and testing them on a sample population to investigate the best approaches to reducing obesity within the workplace.

The implications of this study indicate that there is a need for employers to be more proactive in implementing workplace wellness programs for their employees. While the employee is initially responsible for their own health, research suggest that employers must consider the immense amount of time the employee contributes to the organization and its association with short and long term health. Organizations have made changes in organizational culture through policy changes and healthier alternatives in vending machines; however, more strategic practices must be used to reduce the obesity epidemic. Through the use of workplace wellness programs, employees have the opportunity to improve their health and also promote a

healthy work-life balance. These workplace wellness programs must encompass socio-cultural and environmental aspects.

Summary

Obesity is major health issue in today's society. It is often associated with many other health risks such as diabetes, hypertension and stroke. Recent research has examined the use of workplace wellness programs and their effectiveness in reducing obesity within the workplace. While this research investigates various methods used within organizations, there is very little research that discusses what methods work best overall.

This qualitative content analysis was conducted to examine the correlation of health interventions or workplace wellness programs among obesity within the workplace. The content analysis examined existing articles related to health intervention methods used in organizations to address obesity. Many various methods such as stair climbing, exercise and nutritional practices were found to be effective in reducing obesity and improving weight management. Perceptions of interventions in organizations among both the employer and the employee were viewed as positive and effective; however, employers are concerned that these interventions will not yield a cost-effective benefit, resulting in lack of participation and implementation of a workplace wellness program. Using a three step coding process involving descriptive and pattern coding as well as triangulation, findings of the study suggest that intervention methods that encompass socio-economic and environment factors, healthy lifestyles, nutrition, and physical activity using motivational tools not only aid in reducing obesity within the workplace but also improve employee engagement and encourages positive and supportive work environments.

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